UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,474	10/28/2003	Tomonori Gotoh	FUJS 20.713	5600

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EXAMINER
RIVAS, SALVADOR E

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/695,474	GOTOH ET AL.
	Examiner	Art Unit	
	Salvador E. Rivas	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *10/28/2003 and 02/12/2007*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Information Disclosure Statement

2.   The information disclosure statements submitted on October 28, 2003 and

February 12, 2007 have been considered by the Examiner and made of record in the

application file.

Drawings

3.   Figures 12-17 should be designated by a legend such as --Prior Art-- because

only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 3, 4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over by admitted prior art (**U.S. Patent Application Publication #2004/0085966 A1**) in view of **Opher et al. (U.S. Patent # 5,408,469)**.

Regarding **claim 1**, the admitted prior art teach transmitters in a network where the transmitters have an individual specific address and are connected through different transmission paths (Fig.13) so that a packet with information about a source address is transmitted, each transmitter (Fig.15) comprising: a plurality of transmission path ports respectively connected to said different transmission paths for receiving said packet

(Fig.15 @ 111, 121, 131, 141); and a relay section for relaying the received packet to a relay transmission path of said transmission paths by which said received packet reaches its destination (Fig.15 @ 160); wherein said relay section comprises: a table for storing information about the relay of said received packet to one of said transmission path ports connected to said relay transmission path (read as table register, Fig.15 @ 180, used for storing "...a transmitting port number for relaying data for each destination address.", paragraph [0017] Lines 6-8), and a router (read as routing processing unit, Fig.15 @ 170). However, the admitted prior art fails to teach a table correlated with port identifier of each said transmission path port and the source address of the transmitter that transmitted said packet, a router for extracting the port identifier of the transmission path port that received said packet and said source address contained in said received packet, and routing said received packet to the transmission path port connected to said relay transmission path by referring to said table for said extracted port identifier and source address.

Opher et al. teach a table used by a switch to correlate a port identifier of each said transmission path port and the source address of the transmitter that transmitted said packet (read as a source address lookup table TABLE II, Column 13, Lines 40-49), a router (read as a media controller Fig. 4(a) @ 401) for extracting the port identifier of the transmission path port that received said packet and said source address contained in said received packet ("the media controller circuits 401 provide for stripping of the source address...", Column 13 Lines 21-23, along with "corresponding information identifying the LAN module 201-204 and port number on which the message arrived",

Column 13 Lines 53-55), and routing said received packet to the transmission path port connected to said relay transmission path by referring to said table for said extracted port identifier and source address ("...propagating the association "address X is reachable by module #M, port #N" to the other front end modules;", Column 12, Lines 46-50). It would have been obvious to a person of ordinary skill in the art to combine Opher et al. with the admitted prior art for the purpose of mapping and routing a packet. The motivation being to be able to enhance the efficiency and quality of transmission of packets in a network.

Regarding **claim 2**, and **as applied to claim 1 above**, the admitted prior art teaches a router (read as routing processing unit, Fig.15 @ 170). However, the admitted prior art fails to teach the router (read as routing processing unit, Fig.15 @ 170) comprises: a receiving port extracting part for extracting the receiving port identifier of the transmission path port that received said packet; a source address extracting part for extracting the source address contained in said received packet; and a routing part for performing said routing by referring to said table in response to said receiving port identifier extracted by said receiving port extracting part and said source address extracted by said source address extracting part.

Opher et al. teach a router (read as a media controller, Fig. 4(a) @ 401) for extracting the port identifier of the transmission path port that received said packet and said source address contained in said received packet ("the media controller circuits 401 provide for stripping of the source address and destination address from the information packet", Column 13 Lines 21-23, along with "corresponding information

identifying the LAN module 201-204 and port number on which the message arrived ...",

Column 13 Lines 53-55), and routing said received packet to the transmission path port

connected to said relay transmission path by referring to said table for said extracted

port identifier and source address("...propagating the association "address X is

reachable by module #M, port #N" to the other front end modules;", Column 12, Lines

46-50). It would have been obvious to a person of ordinary skill in the art to combine

Opher et al. with the admitted prior art for the purpose of obtaining certain parameters

from an incoming packet that will allow for packet routing in a network. The motivation

being to be able to enhance the efficiency and quality of transmission of packets in a

network.

Regarding **claim 3**, and **as applied to claim 1 above**, the admitted prior art, as

modified by Opher et al., teaches the transmitters wherein, as said information about

the relay of said received packet correlated with said receiving port identifier and said

source address, said table (read as a table register, Fig.15 @ 180) stores both

information that said received packet is not relayed if it circulates within said network,

and information that said received packet is relayed if it does not circulate within said

network (Fig.15 @ 180 " stores...data", paragraph [0017], 6-7). .

Regarding **claim 4**, and **as applied to claim 3 above**, the admitted prior art, as

modified by Opher et al., teaches the transmitters wherein said network has a mesh

path or ring path through which said received packet can circulate (Fig.13).

Regarding **claim 6**, and **as applied to claim 2 above**, the admitted prior art

teaches the transmitters wherein said routing part comprises: a judging part (Fig. 15 @

173) for judging the relay of said received packet by referring to said table (read as a table register, Fig. 15 @ 180) and an assigning part for assigning said received packet to a transmission path port when it is judged by said judging part that said received packet is relayed (read as a transmitting part Fig. 15 @ 174-177, paragraph [0018] Lines 10-14). However, the admitted prior art fails to teach the contents of the table that are based on said receiving port identifier extracted by said receiving port extracting part and said source address extracted by said source address extracting part.

Opher et al. teach a table used by a switch to correlate a port identifier of each said transmission path port and the source address of the transmitter that transmitted said packet (read as a source address lookup table TABLE II, Column 13, Lines 40-49). It would have been obvious to a person of ordinary skill in the art to combine Opher et al. with the admitted prior art for the purpose of mapping a packet across a network through relay nodes. The motivation being to be able to enhance the efficiency and quality of transmission of packets in a network.

Regarding **claim 7**, the admitted prior art teaches a packet transmission method for a network where transmitters with an individual address are connected through a transmission path (Fig.13) so that a packet with information about the address of a source transmitter is transmitted from the source transmitter to a destination transmitter, in a relay transmitter (Fig.15 @ 180) between said source transmitter and said destination transmitter (Fig.15 @ 111, 112). However, the admitted fails to teach a method comprising a port extracting step of extracting the receiving port identifier in a packet received through said transmission path, an address extracting step of extracting

a source address contained in said received packet, and a routing step of routing said received packet, based on said extracted receiving port identifier and said extracted source address.

Opher et al. teach a method in a media controller (Fig. 4(a) @ 401) comprising of a port extracting step of extracting the receiving port identifier in a packet received through said transmission path, an address extracting step of extracting a source address contained in said received packet ("the media controller circuits 401 provide for stripping of the source address and destination address from the information packet", Column 13 Lines 21-23, along with "corresponding information identifying the LAN module 201-204 and port number on which the message arrived ...", Column 13 Lines 53-55), and a routing step of routing said received packet, based on said extracted receiving port identifier and said extracted source address ("...propagating the association "address X is reachable by module #M, port #N" to the other front end modules;", Column 12, Lines 46-50). It would have been obvious to a person of ordinary skill in the art to combine Opher et al. with the admitted prior art for the purpose of obtaining certain parameters from an incoming packet that will allow for packet routing in a network. The motivation being to be able to enhance the efficiency and quality of transmission of packets in a network.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over by admitted prior art (**U.S. Patent Application Publication #2004/0085966 A1**), in view of **Opher et al. (U.S. Patent # 5,408,469)** and further in of view of **Mizutani et al. (U.S. Patent Application Publication #2004/0076154 A1).**

Regarding **claim 5**, and **as applied to claim 1 above**, the admitted prior art, as modified by Opher et al., teaches the transmitters wherein in the case where a path to a destination transmitter is divided into a plurality of paths and has a redundant structure (as read by the ring topology in Fig.13, where the "counter-rotating ring" forms a redundant topology), said received packet is routed by said router (read as routing processing unit, Fig.15 @ 170). However, the admitted prior art, as modified by Opher et al., fails to disclose the transmission path ports to relay said received packet are assigned in said table so that many of them are not relayed only to a specific path forming said redundant structure.

Mizutani et al. a teaches a routing control unit (Fig.1 @ 10) that determines an output port in the transmitting unit (Fig.1 @ 3) on the basis of the control information such as source and/or destination node IP address received from the receiving unit (Fig.1 @ 2) by referring to the storage routing table SRT (Fig.1 @ 11). Ensuring a plurality of data flows can be simultaneously relayed by "selecting as necessary an NSA by which an area for data relay can be assured" (Fig.14, paragraph [0093], Lines 3-5). It would have been obvious to a person of ordinary skill in the art to combine Mizutani et al. with admitted prior art for the purpose of redirecting a route for a data packet in case of congestion traffic found on a network. The motivation being to be able to find a convenient path for a packet when congestion on a network occurs.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over by admitted prior art (**U.S. Patent Application Publication #2004/0085966 A1**), in view of

Opher et al. (U.S. Patent # 5,408,469) and further in of view of Hariguchi et al. (U.S.
Patent # 6,665,297 B1).

Regarding claim 8, and as applied to claim 7 above, the admitted prior art, as
modified by Opher et al., teaches a method wherein said routing step comprises: a
judgement step of judging the relay of said received packet (read as judging part, Fig.
15 @ 173), based on said extracted port identifier and said extracted source address
(read as information in a table register Fig. 15 @ 180); and an assignment step in
which, when it is judged in said judgement step that said received packet is relayed,
said received packet is assigned to a transmission port (read as a transmitting part Fig.
15 @ 174-177, paragraph [0018] Lines 10-14). However, the admitted prior art, as
modified by Opher et al., fails to teach when the assignment step is judged in said
judgement step that said received packet is not relayed, information that said received
packet is not relayed is issued and said received packet is not assigned to a correlated
transmitting port.

Hariguchi et al. teaches a status register (Fig.4 @ 164) that is read by
microprocessor (Fig.2B @ 54) when updating the routing table (Fig.2B @ 40) during
add and delete operations. The status register includes a hit/miss (H/M) flag indicating
whether the hash circuits might have generated a hit or not, an acknowledge flag
indicating whether an add or delete operation is in progress, and a cycle end flag
(cycle_end) indicating that the add or delete cycle is complete. It would have been
obvious to a person of ordinary skill in the art to combine Hariguchi et al. with the
admitted prior art and Opher et al. for the purpose of securing a destination route for

data packets being processed by a router. The motivation being to accomplish an

efficient data transmission control for packets being relayed across a network.

Conclusion

5.   Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed**

to:

> Commissioner for Patents
> P.O. Box 1450
> Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

> Customer Service Window
> Randolph Building
> 401 Dulany Street
> Alexandria, VA 22314

Any inquiry concerning this communication or early communications from the

Examiner should be directed to Salvador E. Rivas whose telephone number is (571)

270-1784. The examiner can normally be reached on Monday-Friday from 7:30AM to
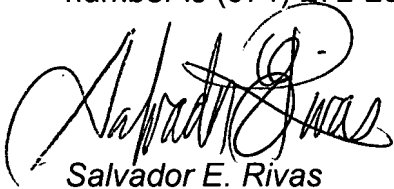
5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Kenneth Vanderpuye can be reached on (571) 272- 3078. The fax phone

number for the organization where this application or proceeding is assigned is (571)

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.   Status information for

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Salvador E. Rivas
S.E.R./ser

August 20, 2007

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER